

AMENDMENTS TO THE CLAIMS

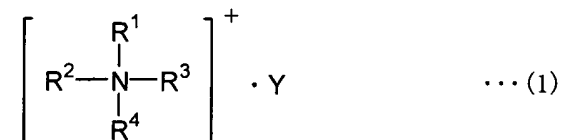
The following listing of claims replaces all prior versions of claims in the application.

1. (Original): A process for photolyzing organic matter, characterized by photolytically degrading organic matter within a reaction system that includes a photocatalyst and a hydrophobic ionic liquid.

2. (Original): The process for photolyzing organic matter of claim 1 which is characterized in that the hydrophobic ionic liquid is a quaternary ammonium-type ionic liquid.

3. (Original): The process for photolyzing organic matter of claim 2 which is characterized in that the quaternary ammonium-type ionic liquid has general formula (1) below

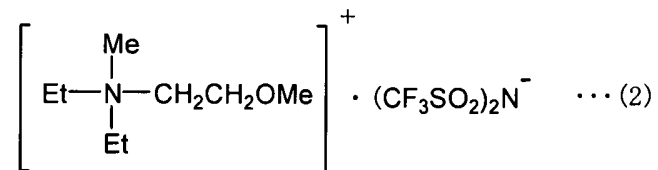
[Chemical Formula 1]



wherein R^1 to R^4 are each independently an alkyl group of 1 to 5 carbons or an alkoxyalkyl group of the formula $R'-O-(CH_2)_n-$ (R' being methyl or ethyl, and the letter n being an integer from 1 to 4) and any two of R^1 , R^2 , R^3 and R^4 may together form a ring, with the proviso that at least one of R^1 to R^4 is the alkoxyalkyl group of the above formula; and Y is a monovalent anion.

4. (Original): The process for photolyzing organic matter of claim 3 which is characterized in that the quaternary ammonium-type ionic liquid has formula (2) below

[Chemical Formula 2]



wherein "Me" stands for methyl and "Et" stands for ethyl.

5. (Original): The process for photolyzing organic matter of any one of claims 1 to 4 which is characterized in that the photocatalyst is titanium dioxide.

6. (Currently amended): A wastewater treatment process which is characterized by using the process for photolyzing organic matter of any one of claims 1 to ~~[[5]]~~ 4.

7. (Original): The wastewater treatment process of claim 6 which is characterized by comprising the steps of, in order:

extracting organic matter by mixing together a hydrophobic ionic liquid and organic matter-containing wastewater so as to move the organic matter from the wastewater into the hydrophobic ionic liquid;

separating the organic matter-containing hydrophobic ionic liquid and the wastewater; and
adding a photocatalyst to the organic matter-containing hydrophobic ionic liquid and carrying out light exposure so as to photolytically degrade the organic matter.

8. (Original): The wastewater treatment process of claim 6 which is characterized by comprising the steps of, in order:

subjecting a mixture of a hydrophobic ionic liquid, a photocatalyst and organic matter-containing wastewater to light exposure under agitation so as to photolytically degrade the organic matter; and

separating the wastewater and the hydrophobic ionic liquid.